

### Abstract

In a system for authenticating information, a holographic element, including a first layer of optical information in a first coded pattern and a second layer of optical information in a second coded pattern is inserted into a reader. The reader includes an opening into which the holographic element may be positioned, a light source, a first detector positioned at a first predetermined distance from the location of the holographic element when the holographic element is positioned in the opening, and a second detector positioned at a second predetermined distance from the location of the holographic element when the holographic element is positioned in the opening.